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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/855,903

05/15/2001

Ian David Johnson

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10/29/2004

Pillsbury Winthrop LLP
Intellectual Property Group
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EXAMINER

BANGACHON, WILLIAM L

ART UNIT

PAPER NUMBER

2635

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/855,903

Applicant(s)

JOHNSON ET AL.

Examiner

William Bangachon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3,4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Inventorship

1. In view of the papers filed 11/14/03, it has been found that this nonprovisional application, as filed, through error and without deceptive intent, improperly set forth the inventorship, and accordingly, this application has been corrected in compliance with 37 CFR 1.48(a). The inventorship of this application has been changed by adding **Simon William Farrow and Brian Alan Whitehead**.

The application will be forwarded to the Office of Initial Patent Examination (OIPE) for issuance of a corrected filing receipt, and correction of the file jacket and PTO PALM data to reflect the inventorship as corrected.

Drawings

2. Figure 2 should be designated by a legend such as **--Prior Art--** because only that which is old is illustrated (specification, page 2, line 16). See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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6. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 5,923,644 (McKeown et al) in view of applicant's admission of prior art (page 2, last paragraph; page 9, line 20-page 10, line 7).

In claim 1, applicant admits using known system with regards to the first (plurality of ingress ports) and third stage (plurality of egress ports) {page 9, lines 23-24}. McKeown is concerned with scheduling connection requests from a plurality of inputs to plurality of inputs {McKeown, col. 2, lines 10-14}. Therefore, it would have been obvious to have a plurality of ingress ports and a plurality of egress ports in the system of McKeown, as claimed, because known systems are readily available, as admitted by the applicant. Further, McKeown et al teach of an arbitration method for selecting the connections to be made by a crossbar switch (22) of a data switching system between a plurality of ingress ports (Q_M) and a plurality of egress ports (C_M) {figure 1}, the arbitration method {figure 5} comprising:

- (i) a request step of at least one ingress port transmitting one or more connection requests indicating egress ports to which a connection is required {McKeown, col. 3, lines 19-32},
- (ii) a grant step of examining the connection requests, and, for each egress port for which there is a connection request, selecting one request for grant, and generating a grant signal indicative of the selected request {McKeown, col. 6, lines 47-54}, and

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- (iii) an accept step of examining the grant signals and, for each ingress port for which there is a grant signal, selecting one grant signal to accept, thereby defining an ingress to egress port connection across the crossbar switch (22) {McKeown, col. 3, lines 34-50},

characterised in that:

the method employs, for each possible combination of an ingress port and an egress port, a respective weight value {McKeown, col. 7, lines 21-24; lines 55-57}, a connection request only being selected in said grant step if the corresponding weight value is not zero {McKeown, col. 7, lines 27-29; lines 57-61; col. 8, lines 23-27};

and the method further comprises:

each time a connection is made in the crossbar switch involving an ingress port and an egress port, decrementing the corresponding weight value {McKeown, col. 8, lines 36-42}; and

in said grant step, if for a given egress port, there are no connection requests having non-zero weight values, the weight values are reset to default values before said selection {McKeown, col. 7, lines 9-13}.

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In claim 2, a method according to claim 1 in which the default values for different respective weight values of at least one egress port are not equal {McKeown, col. 7, lines 49-51}.

In claim 3, a method according to claim 2, in which the default values are selected according to a desired statistical frequency of connections between specific ingress and egress ports {McKeown, col. 7, lines 30-53}.

In claim 4, a method according to claim 1 in which in said grant step, each connection request is applied to a masking element (60) having a working register whose contents are decremented by one each time a crossbar switch connection is made involving the said ingress port, the contents of the working register being used to mask the connection request generated by the ingress port when said contents are zero {McKeown, col. 8, lines 39-44}.

In claim 5, a method according to claim 4 in which said masking element further comprises a default weight register (70), programmed with the default weight {col. 8, lines 18-20} to be allocated to said working register by a system control device, and said resetting comprises copying the value in the default weight register to the working register {McKeown, col. 8, lines 20-22}.

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Claim 6 recites the combination of claims 1 and 5, therefore rejected for the same reasons.

Claim 7 recites the limitation of claim 2, therefore rejected for the same reasons.

Claim 8 recites the limitation of claim 4, therefore rejected for the same reasons.

Claim 9 recites the limitation of claim 5, therefore rejected for the same reasons.

In claim 10, a local area-switching network comprising a system according to claim 5 {McKeown, col. 1, lines 16-25; col. 3, lines 12-16}.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USP 5,175,858 (Hammerstorm) and USP 6,757,246 (Alasti et al) are cited in that both patents teach of a weight based arbitration/scheduling system.

USP 5,265,235 (Thacker) is cited in that it teaches of a method and apparatus for resource arbitration.

Examiner Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Bangachon whose telephone number is 571-272-3065. The examiner can normally be reached on 4/4/10.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 571-272-3068. The fax phone numbers

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for the organization where this application or proceeding is assigned is 703-872-9314 for regular and After Final formal communications. The examiner's fax number is 571-273-3065 for informal communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

William L Bangachon
Examiner
Art Unit 2635

October 6, 2004

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

